基础理论部分

0. Can you come up out 3 sceneraies which use AI methods?¶
Ans: 1) Driverless cars 2) Smart speakers 3) Robots

1. How do we use Github; Why do we use Jupyter and Pycharm;
Ans:
1) Github is a coding hosting platform for version control and collaboration. It lets you and others work together on projects from anywhere.
2) Jupyter is a free, open-source, interactive web tool. It can be used to combine software code, computational output, explanatory text and multimedia resources in a single document. Pycharm is IDE for python language. Its advantages are code completion, type hinting, git visualization in the editor and package management.

2. What's the Probability Model?
Ans: A probability model is a mathematical representation of a chance occurrence. A model consists of sample space, the set of all possible outcomes of an experiment, and a set of probabilities assigned to each element of the sample space.

3. Can you came up with some sceneraies at which we could use Probability Model?
Ans: 1) Lottery tickets 2) Dice 3) Optional poll

4. Why do we use probability and what's the difficult points for programming based on parsing and pattern match?
Ans: Probability can describe the likelihood of each of the possible events. One element will be affect by a lots of factors. It is difficult to calculate it.

5. What's the Language Model;
Ans: Language model is a probability distribution over sequence of words.

6. Can you came up with some sceneraies at which we could use language Model?¶
Ans: 1) 输入法(语音听写) 2) smart speaker 3) human-machine interaction

7. What's the 1-gram language model;
Ans: 1-gram language model means words are independent of each other.

8. What's the disadvantages and advantages of 1-gram language model;
Ans:
Advantages: It's easier to calculate the joint probability of words.
Disadvantages: It does not consider the affect of between words.

9. What't the 2-gram models;
Ans:The 2-gram model approximates the probability of a word given all the previous words by using only the conditional probability of the preceding word.